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Pursuing Equity in Diabetes Population

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Abstract

Background

Poor glycemic control (HbA1c >8) overtime leads to microvascular and macrovascular complications after the first and third years respectively, ultimately resulting in death after five years (Karter, 2016). Current Kaiser Permanente (KP) data stratified by race, ethnicity, age, and gender shows a significant disparity gap between Hispanics/Latino and Caucasian populations. The Pursuing IHI initiative is over a 2-year period completed at a microsystem that is focusing on health equity practices to reduce disparity gaps.

Project aim

KP Riverside, microsystem selected has a large population of Hispanic/Latino KP members, with focus on health equity. The project aim is to improve glycemic control (HbA1c< 8) among Hispanic/Latino diabetes patients by 1% from a baseline of 9.8% to 8.8% per KP Riverside HEDIS data using best practices created from evaluating the relationship between organizational leadership and community effects on clinical outcomes by performing a PDSA cycle by Q4 2018. The initiative is a 2-year commitment, budget approval will be required for both 2017 and 2018. A 1% decrease in HbA1C is significant in preventing microvascular and macrovascular complications in poorly controlled diabetes patients.

Results and Sustainability Plan

The results are the development of the project charter and the implementation plan for beginning work with this site. Long and short term sustainability plans are needed to support the success of this project and to integrate the global goal of health equity. The short-term plan includes the CNL assuming the role of the performance improvement advisor and collaborating with the inter-professional team to implement the improvement process (AACN, 2013; Harris, Roussel, &

Thomas, 2017). This includes conducting a quick baseline survey or microsystem assessment to understand current practices and identify gaps. Long term plan includes on-going assessment of the microsystem and performance improvement data to demonstrate sustainability and identify new improvement opportunities.

Keywords: diabetes, health equity, Hispanics, Latinos, costs, diabetes management, health disparities, and best practice strategies.

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Clinical Leadership Theme

The clinical leadership themes identified for this project includes organizational and systems leadership, risk anticipation, quality improvement and safety, translating and integrating scholarship into practice, inter-professional collaboration for improving patient and population health outcomes, the use of informatics, and advocacy (AACN, 2013). The CNL must be knowledgeable about the microsystem and can lead and influence a multidisciplinary team (AACN, 2013; AACN 2007). The CNL should understand the crucial role of systems theory in the assessment, design, delivery, and evaluate health care within complex organizations (AACN 2013; AACN, 2007). In addition, the CNL needs to demonstrate financial knowledge regarding economic principles and practices, including cost-benefit analysis, budgeting, and strategic planning, human and other resource management, marketing, and value-based purchasing (AACN, 2013; AACN 2007).

Statement of the Problem

New Kaiser Permanente (KP) Northern California research endorses the urgency of early glycemic control for diabetic patients. Evidence suggest that poor glycemic control (HgbA1c >8) overtime leads to microvascular and macrovascular complications after the first and third years respectively, ultimately resulting in death after five years (Karter, 2016). Current KP data stratified by race, ethnicity, age, and gender shows a significant disparity gap between Hispanics/Latinos and the Caucasian populations. The project will be the extension of this work to include integration and implementation of health equity across the care continuum with emphasis on improving HgbA1c control in the Hispanic/Latino population. KP Riverside clinic treats patients with chronic conditions such as diabetes and hypertension. For the purposes of

Remote Glucose Monitoring, patients with poor glycemic control defines as HgbA1c > 8 will be given first considerations during the initial implementation.

Project Overview

The improvement theme is an equity focus for the organization of three components; leadership, community, and clinical outcomes.

Project aim: To improve glycemic control (HgbA1c< 8) among Hispanic/Latino diabetes patients by 1% from a baseline of 9.8% to 8.8% per KP Riverside HEDIS data using best practices created from evaluating the relationship between organizational leadership and community effect on clinical outcomes by performing a PDSA cycle by Q4 2018.

Global aim: To integrate KP National health equity strategy from macro/mesosystem perspective to the microsystem level and to reduce health disparity gaps among Hispanic/Latino diabetic members as evidenced by HEDIS data (refer to project aim) by Q4 2018.

Specific: To improve glycemic control of diabetic patients (HgbA1c < 8). To reduce the disparities gap by 1% among Hispanic/Latinos patients to 8.8% from a baseline of 9.8% by Q4 2018 by improving language concordance, improving cultural competency training among staff using KP AIDET tools, provider/patient communication (email vs telephone), community resources, and assessing health literacy/self- management needs.

A multidisciplinary team is needed based on the stakeholder's analysis to implement equity. This team includes:

- Physicians that serve as Clinical Advisors (national, regional, and local)
- Physician Leadership (national, regional, and local)
- Physician champions from Endocrinology and Primary Care
- A representative for IT (important if technology interventions are developed)

- A Pharmacy leader
- Leader(s) of Nursing / Panel Management
- A Labor representative (impact to workflows)
- A CNL with capacity to provide project management and assist with customizing workflow, patient education, and training materials for panel managers, physicians and team members.
- Support staff (national to assist CNL)
- MPH intern
- National Quality Director (to remove barriers and establish initial relationships with Executive Leadership at national, regional, and local levels)
- Executive sponsors (national senior leaders that support the work of the Pursuing Equity initiative)

Literature Review

PICOT Question

In an ambulatory care setting (P), what are the best practices for improving glycemic control (I) for Hispanic/Latino diabetes patients <8% (O) using the health equity strategy for long term sustainability (over a one-year period) (T).

Search Strategy

An electronic search was conducted in the months of April, May and June 2017 in the CINAHL Complete, and Pub Med databases using combinations of the following search terms: diabetes, health equity, Hispanics, Latinos, costs, diabetes management, health disparities, and best practice strategies. The search yielded 30 articles. More articles could have been yielded if

search year was expanded to 2005, as there are limited current applicable studies. Limitations were set to include English only, research, and publication dates no earlier than 2012. Twelve articles met search criteria, and six were selected for review. The John Hopkins evidence based practice research tools (JHEBP) were used to appraise the evidence for this review.

Evidence findings

Literature findings consist of a prevalence based study, 2 randomized control trials (RCTs), conceptual framework white paper, a systematic literature review of RCTs/cohort studies, and a consensus/position paper to form the foundation of the diverse body of evidence used for this project. Additional RCTs and studies were also found and will be used to support the body of evidence. Current intervention based studies were limited because most studies were performed prior to 5 years. Clinical practice guidelines and bundles based on health equity and race/ethnicity were unavailable.

American Diabetes Association (2013) performed a prevalence based study that combines the demographics of the U.S. population in 2012 with diabetes prevalence, epidemiological data, health care costs, and economic data to determine health care and lost productivity costs associated with diagnosed diabetes (ADA, 2013). The authors analyzed the prevalence of diagnosed diabetes, utilization and costs attributed to diabetes by age group from 18 to over 70 years of age, sex, race/ethnicity, and insurance status using data sources derived from national surveys, government and commercially insured claims databases. Findings of the study suggested that 22.3 million people are diagnosed with diabetes in the U.S. The financial implications of diabetes in the U.S. are staggering totaling approximately $245 billion, which include $176 billion in direct medical costs and $69 billion in lost productivity (ADA, 2013). Elderly patients (65 years and above) were found to have the most direct medical costs, while

indirect costs were mostly absorbed by patients who were 18 to 64 years. Adults with undiagnosed diabetes and prediabetes were found to have added costs, however, these costs were not included in this study. The clinical implications of this study measure the economic burden of diagnosed diabetes in the U.S. Study within the last 5 years and can be used to establish a business case for the importance of reducing health disparities among Latino patients.

In the conceptual framework paper, the authors suggest the following for measuring health equity: identifying a reference point from which to measure disparities, measure disparities in both absolute and relative terms, for relative measures across different health indicators, express all indicators in terms of adverse events, pairwise comparisons to describe disparities, and use a summary measure of disparities over time for multiple populations (Wyatt, Laderman, Botwinick, Mate, & Whittington, 2016). The clinical implications of the white paper serve as a basis of IHI's Pursuing Equity initiative with KP, in addition to the continuation of building upon the triple aim: improving patient care, improving health of populations, and reducing costs per capita (Wyatt, Laderman, Botwinick, Mate, & Whittington, 2016). The strengths of the newly developed framework model assist health care organizations to integrate health equity across care continuum and reduce disparities based on race/ethnicity. The model will not be formally piloted until 2017 within the healthcare setting, which is a limitation. Therefore, there are no formal studies that can measure effectiveness and outcomes. An additional limitation is the setting, which limits generalizability. The model will need to be tailored to the individual needs of the health care organization (HCO), considering HCO's size, race/ethnicity populations served, and disease prevalence.

In the 2 RCTs, both studies measured the use community health workers (CHWs) to improve HgbA1c outcomes among Hispanic/Latino patients with poorly controlled diabetes as

defined as HgbA1c >8% (Kenya, Lebron, & Arrechea, 2014; Perez-Escamilla et al., 2015). In addition to using CHWs to improve glycemic outcomes, Kenya et al. (2014) focused on studying the relationship of pre/post behaviors of self -monitoring of blood glucose (SMBG); glucometer use, population characteristics, and personal observations of the researchers (Kenya, Lebron, & Arrechea, 2014). Both studies concluded significant improvement in HgbA1c outcomes when using CHWs to support diabetes care among Hispanic/Latino patients with poorly controlled diabetes (Kenya, Lebron, & Arrechea, 2014; Perez-Escamilla et al., 2015). It was also concluded that SMBG behaviors were not factors in glycemic control. Clinical implications from both studies support the importance of the relationship between community and clinical outcomes.

In the systematic review of RCTs and cohort studies paper, the authors measured success rates of intervention features, which were calculated based on effectiveness in improving glycosylated hemoglobin (HgbA1c), anthropometrics, physical activity, or diet outcomes negatively or positively (Gucciardi, Wing-Sheung, Manuel, & Sidani, 2013). A significant change (p-value 0.05) in outcomes defined success, in the hypothesized direction. The results showed that five intervention features with positive results: hospital-based interventions, group interventions, the use of situational problem solving, frequent sessions, and incorporating dietitians as interventionists. An additional six intervention features had high positive rate differences (i.e. 50%) on specific outcomes. Findings of the paper suggested different diabetes self- management education (DSME) interventions may influence broad and specific self-management outcomes for women of African/Caribbean and Hispanic/Latin groups (Gucciardi, Wing-Sheung, Manuel, & Sidani, 2013). Clinical implications support an emphasis on patient-centered care and suggest that providers can consider options based on DSME intervention features for its broad and specific impact on outcomes (Gucciardi, Wing-Sheung, Manuel, &

Sidani, 2013). However, most studies focused on interventions for women of African/Caribbean descent, limited studies focused on Hispanic/Latino women.

In the consensus/position paper, the authors reviewed e-health strategies for Latino patients with type 2 diabetes (T2D). Disparities Solutions Center experts developed recommendations based on current research and modalities available to reduce disparities among Latino diabetic patients. These strategies included using components of successful traditional non- IT self-management education programs such as e-health text messaging; merging the community health worker model and e-health; deployment of tablet technology and the community health worker model; tailoring e-health interventions to include cultural components and acculturation (Lopez, Tan-McGrory, Horner, & Betancourt, 2016). Findings of the study suggest that personalization and standardization of e-health interventions on multiple modalities will help promote long-term reductions in type 2 diabetes disparities. Prevalence rates among T2D Latinos continues to rise, e-health strategies will become important in promoting prevention and self- management behaviors, team based care, and increasing patient engagement/participation for clinicians (Lopez, Tan-McGrory, Horner, & Betancourt, 2016).

Additional studies found in this paper support the emerging themes from the body of evidence that include using community resources to promote self-management of diabetes care, developing best practice strategies around cultural relevance, acculturation, using tools of technology, and customizing interventions to fit the needs of Hispanic/Latino patients with poorly controlled diabetes to improve disparity gaps and glycemic outcomes (Bartolome, Makarem, & Arakelian, 2016; Lopez, Grant, Marceau, Piccolo, & McKinlay, 2016; Lyles, Ratanawongsa, Bolen, & Samal, 2017; Rawlins, Toscano-Garand, & Graham, 2017). It is also identified that improving patient outcomes by decreasing disparities is supported by

organizational leadership (Abdus, Mistry, & Selden, 2015; Adepoju, Preston, & Gonzales, 2015; Wong, LaVeist, & Sharfstein, 2016).

Rationale

Microsystem Assessment Description

Kaiser Permanente Riverside Medical Center (KP Riverside) Indio clinic treats patients with chronic conditions such as diabetes and hypertension. For the purposes of this project, patients with poor glycemic control defines as HgbA1c > 8 will be given consideration. KP Riverside Indio, the microsystem pilot site chosen has a large population of Hispanic/Latino KP members, with focus on health equity. This microsystem has already implemented changes using a health equity lens such as switching from a care management approach to a panel/population management approach for diabetes care among Hispanic/Latino members. Orr & Davenport describes the model as being "proactive systems of health care delivery to meet the needs of populations instead of reacting to exacerbations of illness and acute care needs," (Orr & Davenport, 2015). Population health and management is essential to assessing population needs, and pioneering methods to influence large numbers of people to embrace behavior changes of health promotion and prevention (Orr & Davenport, 2015).

Quality gap and Alignment with organizational goals

KP National Quality has adopted the 6 IOM aims as a part of the clinical quality strategy for the organization for 2017. Equity is one of the 6 aims that previously was not given enough attention and focus within the organization. As previously stated, current KP data indicate significant disparities gaps among African American and Hispanic/Latino members in diabetes outcomes with members of the Latino ethnicity lagging far behind other groups (refer to baseline data in Appendix B: Project charter). Equitable care for diabetes was established as an annual

incentive performance goal for 2017, given that all populations are below the HEDIS benchmark of the 90th Significant costs are attributed to diabetes for government and commercially insured patients that impact the organization in the ways of care delivery, inpatient stays, and medication resources (ADA, 2013; Fitch, Pyenson, & Iawasaki, 2013). Health equity and reducing disparities are aligned with KP's mission and vision to deliver high quality care to its members and the communities in which the organization serve (KP,'s mission statement, 2017). Senior leaders committed to incorporating equity from a macrosystem strategy to microsystem implementation by creating an equity framework that will aid in the process.

ROI

The commitment to IHI was made after budgets for 2017 had been finalized. There will be 1-2 face to face meetings each year with both IHI and KP Riverside including the IHI Annual Forum. Most activities are virtual, but some contact is required such as the initial project kickoff with KP Riverside. Since the initiative is a 2-year commitment, budget approval will be required for both 2017 and 2018. Request amount for 2017 budget is $43,000, which are estimated travel costs to the facility (Riverside) and for 2018 budget is $45,000 to include KP hosting a face to face meeting (refer to Table 2, pg. 13). An additional $8,000 is requested for hiring a contracted vendor to conduct focus groups of interviewing leaders, managers, and Hispanic/Latino members at KP Riverside (refer to Table 3, pg. 14). There is a $884.48 variance from 2017 request to 2018 to include covering additional charges of KP hosting a face to face conference in 2018 (65-75 participants) (Penner, 2017). Staff expenses include 1 CNL and 1 MPH summer intern available for this project (Gould, 2017). For the purposes of this paper, staff expenses are included in the calculation of total project costs. Given that the funding is limited, the CNL can impact the

budget by reducing travel costs using video conferencing with the microsystem staff and managing other overhead expenses to maintain budget costs.

In calculating the ROI, a cost benefit analysis was performed for year one and year two using a sample size of 220 patients assuming 50% have commercial coverage (n=110) and 50% have government coverage (n=110). Yearly cost avoidance calculations were derived by multiplying monthly cost avoidance amount by the number of patients (n=110) x 12 months. Since Medicare/Medicaid and commercial costs varied, the calculations were added together to get the sum of $229, 668.80 as the annual cost avoidance total (refer to Table 1, pg. 12). This amount can also be referred to as the total benefits, which is described as the "total savings or contributions of program or service" (Penner, 2017). As previously stated, the total costs of the project are $222, 968.48 for 2 years. The benefits costs ratio show that the project saves approximately over $2 for every $1 spent (refer to Table 1, pg. 12).

Methodology

IHI Model for Improvement

The IHI Model for Improvement addresses the following questions to incorporate into this project: what are we trying to accomplish? How will we know that a change is an improvement? What change can we make that will result in an improvement? (IHI, 2016). Achieving the Triple aim requires CNLs to become high performing team members who are experts in improving quality of care, health promotion that affect long-term health, reducing costs, and ensuring patient satisfaction with innovation in the care delivery setting of the microsystem (AACN, 2013; Orr & Davenport, 2015).

In addition, the Pursuing Equity initiative has 5 components to support structural change and improvement consisting of the following: making health equity a strategic priority, developing structure and processes to support equity work, deploying specific strategies to address the multiple determinants of health on which health care organizations can have an impact, decreasing institutional racism within the organization, and developing partnerships with community organizations (IHI, 2016). KP is partnering with IHI Pursuing equity initiative (2-year period) to address health equity by examining the relationship between organizational leadership and community on impacting clinical outcomes. A Plan, Do, Study, Act cycle will be performed to test best practices and interventions with the ambulatory setting.

Project Charter

The project charter is a partnership with KP Riverside Medical Center and consist of the following stakeholders; CNL/National Program Leader, MPH Intern, Director of Hospital & Health Plan Oversight and Equitable Care (remove barriers), SCAL Regional Leadership, KP Riverside Executive Medical Director, KP Riverside Leadership, KP Riverside Nursing Leadership, Physician & Nursing Leads, Staff Champions, and Program Office Support staff. Refer to Appendix B: Project Charter for further details.

Change Theory and Conceptual Framework

The conceptual framework of this project is composed of Kotter's organizational model of change and Institute of Healthcare Improvement's Achieving Health Equity: A guide for Health Care Organizations white paper. The Kotter's model of change consists of eight phases; establishing a sense of urgency, creating a guiding coalition, developing a change vision, communicating the vision for buy in support, empowering broad based action, generating short

term wins, reinforcing the change, and institutionalized new approaches (Orr & Davenport, 2015). This change theory is highly effective when organizations undergo implementation of large change that impact processes, structures, and workflows such as the implementation of electronic medical records and health care management projects (Orr & Davenport, 2015). Integrating the health equity strategy within KP and reducing disparities require a complete paradigm shift within the organization that can only be supported by using the Kotter's change model.

Family of Measures

Data definitions for measurement are the following: population health, social determinants of health, health equity, health disparity and health inequity, and health care disparity. Refer to Appendix B: Project charter for further details.

Measurement Strategy and Data Collection Plan

Both outcome and process measures are needed to track performance improvement and to study and understand the impact of health equity on clinical outcomes. Samples of metrics include measuring patient touches, tracking treatment intensification, tracking patient adherence leadership questionnaire findings, and community needs data. Data will be obtained from HEIDIs reports, which stratifies by race, ethnicity, age, and gender, and KP internal data reports (i.e. Health Connect and the Online Personal Action Plan) from a sample of 30 patient records to establish baseline. After baseline data is collected, 10 patient records will be reviewed for project measures per week for Q3 2017. Data plan will be reevaluated monthly pending review of results. Refer to Appendix B: Project Charter for further details.

Changes tested and PDSA cycles

Expected changes tested to include culturally tailored technology interventions of KP secured email, texting, and Remote Glucose monitoring tools to improve glycemic control among Hispanic/Latino type 2 diabetes members. These changes will be implemented after evaluating leadership focus group findings and community needs assessment data to determine correlations, if any to clinical outcomes (Lopez, Tan-McGrory, Horner, & Betancourt, 2016). PDSA cycles will perform a small test of change to determine scope of scalability and spread.

Timeline

The Pursuing IHI initiative is over a 2-year period completed at a microsystem that is focusing on health equity practices to reduce disparity gaps. For the purposes of this project, a project charter playbook will be developed by July 30, 2017 outlining next steps of conducting leadership focus groups, reviewing community needs assessment data, and collaborating with the microsystem prior to developing interventions to test. Refer to Appendix B: Project Charter for further details.

Expected Results

Significant changes in improving glycemic control (HgbA1c < 8%) among Hispanic/Latino members should be shown in the Q1 2018 HEDIS data. Health equity strategy will be fully hardwired into the microsystem by Q1 2018 as evidenced by not only improvement in diabetes outcomes, but also spread to colorectal cancer screening (CRC) and hypertension (HTN) sustainability rates.

Nursing Relevance

Healthcare delivered through an equity lens will not only address disparities, but will demonstrate financial responsibility by providing customized need based care. Rising health care costs, income, social determinants, and health status will impact coverage and access challenging

CNLs to deliver and provide patient care (King & Gerard, 2016). Balancing financial stability and patient preferences will impact future trends in healthcare (Harris, Roussel, & Thomas, 2017). CNLs can use equity to influence change within the microsystem and participate in developing health policies that promote the health and well-being of the society (Harris, Roussel, & Thomas, 2017).

Summary Report

Results

The results are the development of the project charter and the implementation plan for beginning work with this site. To date, the project continues in the development stage as key stakeholders are in the process of being selected at the microsystem. Next steps include meeting with KP Riverside to begin the process of implementing the initial steps of conducting the leadership focus groups. A planned visit to KP Riverside will be scheduled for later in the year identified as the first Kick off meeting for this project. A revised microsystem assessment will be conducted to include equipment needs and checking teleconferencing and virtual capabilities. A drafted project charter has been developed that will be presented during the first meeting with the microsystem (Appendix C, pg. 32). A questionnaire was developed and currently being vetted through a KP researcher for validity.

Sustainability Plan

Long and short term sustainability plans are needed to support the success of this project and to integrate the global goal of health equity. For the short-term plan, the CNL must assume the role of the performance improvement advisor and collaborate with the inter-professional team to implement the improvement process (AACN, 2013; Harris, Roussel, & Thomas, 2017). This includes conducting a quick baseline survey or microsystem assessment to understand

current practices and identify gaps. An overview of explaining the importance of quality improvement and the process with be discussed followed by providing KP Riverside copies of the literature review. The CNL will then discuss the quality improvement tools within the project charter such as the driver diagram, process mapping, SWOT analysis, and baseline data to develop a plan to move forward. The driver diagram is important in developing the aim, primary, and secondary drivers for the project. After the driver diagram is developed, process mapping will occur to help progress next steps of the project. A SWOT analysis will assess for barriers that may potentially impede integrating health equity and improving diabetes outcomes within the microsystem. Baseline data serves as an initial starting point and assist in developing the measurement strategy of the project. After baseline data is analyzed, interventions will be created to be tested in the Plan, Do, Study, Act (PDSA) cycle. The PDSA cycle will determine whether the specific intervention being tested can be scalable and spread throughout KP Riverside and potentially beyond. The long-term plan includes on-going assessment of the microsystem and performance improvement data to demonstrate sustainability and identify new improvement opportunities.

Conclusion

The value of performing diabetes health equity work is immensely important to improving clinical outcomes. Social determinants of health (SDH) of race, ethnicity, age, gender, socio-economic status can impact glycemic control even when health providers assume to be giving “equal care” to all. Integrating health equity and reducing disparities demonstrate the commitment of KP executing on its mission and vision to deliver high quality care to its members and the communities in which the organization serve (KP,’s mission statement, 2017).

References

Abdus, S., Mistry, K.B., & Selden, T.M. (2015). Racial and ethnic disparities in services and the Patient Protection and Affordable Care act. *American Journal of Public Health, 105*(S5), S668-S675. doi: 10.2105/AJPH.2015.302892

Adepoju, O.E., Preston, M.A., & Gonzales, G. (2015). Healthcare disparities in the post-affordable care act era. *American Journal of Public Health, 105*(S5), S665- S667. doi: 10.2105/AJPH.2015.302611

American Association of Colleges of Nursing. (2013). Competencies and curricular expectations for clinical nurse leader education and practice. Retrieved from http://www.aacn.nche.edu/cnl/CNL-Competencies-October-2013.pdf

American Association of Colleges of Nursing. (2007). White paper on the education and role of the clinical nurse leader. Retrieved from http://www.aacn.nche.edu/Publications/WhitePapers/ClinicalNurseLeader07.pdf

American Diabetes Association. (2013). Economic Costs of Diabetes in the U.S. in 2012. *Diabetes Care, 36*, 1033-1046. Retrieved from: http://care.diabetesjournals.org/content/early/2013/03/05/dc12-2625.full-text.pdf

Bartolome, R., Makarem, A., & Arakelian, A. (2016). The role of health-system pharmacy in addressing health equity and healthcare disparities. *California Journal of Health-System Pharmacy*, 74-75.

Buchmueller, T.C., Levinson, Z.M., Levy, H.G., & Wolfe, B.L. (2016). Effect of the Affordable Care Act on racial and ethnic disparities in health insurance coverage. *American Journal of Public Health, 106*(8), 1416-120. doi: 10.2105/AJPH.2016303155

Center for Disease Control and Prevention. (2017). Health disparities in HIV/AIDS, viral hepatitis, STDs, and TB. Retrieved from https://www.cdc.gov/nchhstp/healthdisparities/hispanics.html

Fitch, K., Pyenson, B.S., & Iwasaki, K. (2013). Medical claim cost impact of improved diabetes control for Medicare and commercially insured patients with type 2 diabetes. *Journal of Managed Care Pharmacy*, *19*(8), 609-620. Retrieved from: http://www.amcp.org/WorkArea/DownloadAsset.aspx?id=17204

Gucciardi, E., Wing-Sheung, C.V., Manuel, L., & Sidani, S. (2013). A systematic literature review of diabetes self-management education features to improve diabetes education in women of Black African/Caribbean and Hispanic/Latin American ethnicity. *Patient Education and Counseling, 92(*2), 235-245.

Harris, J. L., Roussel, L.A., & Thomas, P. L. (2018). *Initiating and sustaining the clinical nurse leader role: a practical guide*. (3rd ed). Burlington, Massachusetts: Jones & Bartlett Learning.

Jeffers, B. R., & Astroth, K.S. (2013). The clinical nurse leader: prepared for an era of healthcare reform. *Nursing Forum, 48*(3), 223-229.

Karter, A. (2016). Senior Investigator, Kaiser Permanente Northern California Division of Research Presentation at ADA, Kaiser Foundation Health Plan.

Kenya, S., Lebron, C., Arrechea, E.R., & Li, H. (2014). Glucometer use and glycemic control among Hispanic patients with diabetes in Southern Florida. Clinical Therapeutics, 36(4), 485-493. doi: 10.1016/j.clinthera.2013.12.009.

King, C.R., & O'Toole Gerard, S. (Ed.). (2016). *Clinical nurse leader: certification review*. 2nd ed. New York, NY: Springer Publishing Company, LLC.

Lopez, L., Grant, R.W., Marceau, L., Piccolo, R., & McKinlay, J.B. (2016). Association of acculturation and health literacy with prevalent dysglycemia and diabetes control among Latinos in the Boston area Community Health (BACH) survey. *Journal of Immigrant Minor Health, 18*(6), 1266-1273. doi: 10.1007/s10903-016-0362-x.

Lopez, L., Tan-McGrory, A., Horner, G., & Betancourt, J. (2016). Eliminating disparities among Latinos with type 2 diabetes: effective e-health strategies. *Journal of Diabetes and Its Complications, 30*, 554-560. doi: 10.1016/j.diacomp.2015.12.003

Lyles, C.R., Ratanawongsa, N., Bolen, S.D., & Samal, L. (2017). mHealth and health information technology tools for diverse patients with diabetes. *Journal of Diabetes Research, 8*, 9-12. doi: 10.1155/2017/1704917.

Orr, P., & Davenport, D. (2015). Embracing change. *Nursing Clinics of North America, 50*(1), 1-18. doi: 10.1016/j.cnur.2014.10.001

Penner, S. J. (2017). *Economics and financial management for nurses and nurse leaders*. 3rd ed. New York, NY: Springer Publishing Company.

Perez-Escamilla, R., Chhabra, G.D.J., Fernandez, M.L., Segura-Perez, S., Vega-Lopez, S., Kollannor-Samuel, G., Calle, M., D'Agostino, D. (2015). Impact of a community health workers-led structured program on blood glucose control among Latinos with type 2 diabetes: the DIABLBEST trial. *Diabetes Care, 38*, 197-205. doi: 10.2337/dc14-0327.

Rawlins, W.S., Toscano-Garand, M.A., & Graham, G. (2017). Diabetes management with a care coordinator improves glucose control in African Americans and Hispanics. *Journal of Education and Health Promotion, 6*(22), 1-19. doi: 10.4103/jehp.jehp 27 15

Wong,W.F., LaVeist, T.A., & Sharfstein, J.M. (2016). *Journal of the American Medical Association, 313*(14), 1417-1418. doi: 10.1001/jama.2015.2434.

Wyatt, R., Laderman, M., Botwinick, L., Mate, K., & Whittington, J. (2016). *Achieving Health Equity: A Guide for Health Care Organizations*. IHI White Paper. Cambridge, Massachusetts: Institute for Healthcare Improvement.

Appendix A: Evaluation Table

Citation	**Conceptual Framework**	**Design/ Method**	**Sample/ Setting**	**Variables Studied and Their Definitions**	**Measurement**	**Data Analysis**	**Findings**	**Appraisal: Worth to Practice**
ADA, 2013	None	Prevalence based approach that combines the demographics of the U.S. population in 201 with diabetes prevalence, epidemiological data, health care costs, and economic data`	Sources for data were derived from Medicare standard analytic files, national surveys, and one of the largest claims databases for commercially insured population in the U.S.	Estimating the size of the population with diabetes; estimating the direct medical costs attributed to diabetes; estimating the indirect cost attributed to diabetes to include lost work productivity as defined by absenteeism, presenteeism, inability to work, and reduced productivity for those not in the workforce	Calculation of diabetes costs using diabetes prevalence, health care costs (2012), economic data, and epidemiological data	The authors analyzed the prevalence of diagnosed diabetes, utilization and costs attributed to diabetes by age group from 18 to over 70 years of age, sex, race/ethnicity, and insurance status	22.3 million people are diagnosed with diabetes in the U.S. Diabetes costs the nation a total of $245 billion, which include $176 billion in direct medical costs and $69 billion in lost productivity. Elderly patients (65 yrs. +) have the most direct medical costs, while most indirect costs are absorbed by 18 to 64 yrs. Adults with undiagnosed diabetes and prediabetes have added costs, which are not included.	Strengths: Measures the economic burden of diagnosed diabetes in the U.S. Study is within the last 5 years. Findings can be used to establish business case for reducing health disparities among Latino patients. credible Limitations: Limited stratification and specifics based on race/ethnicity. Does not include patient with undiagnosed diabetes. Feasibility: Can be applicable to all patients diagnosed with diabetes in the U.S. **L V, A**.

Gucciardi Wing-Sheung Manuel Sidani, (2013)	none	Systematic literature review of 10 randomized control trials and 3 cohort studies	The authors conducted a literature search in six health databases for randomized controlled trials and comparative studies.	Success rates of intervention features were calculated based on effectiveness in improving glycosylated hemoglobin (HgbA1c), anthropometrics, physical activity, or diet outcomes. Calculations of rate differences assessed whether an intervention feature positively or negatively affected an outcome	38 intervention features in relation to their success with an outcome from 13 RCT/cohort studies.	Interventions were analyzed based on their success in producing a significant change (p-value 0.05) in outcomes, in the hypothesized direction. Five intervention features had positive rate differences across at least three outcomes: hospital-based interventions, group interventions, the use of situational problem solving, frequent sessions, and incorporating dietitians as interventionists. Six intervention features	Different DSME intervention features may influence broad and specific self-management outcomes for women of African/Caribbean and Hispanic/Latin ethnicity.	Strengths: Emphasis on patient-centered care, patients and care providers can consider options based on DSME intervention features for its broad and specific impact on outcomes. Limitations: 8 studies were Black/African based, 5 studies were Hispanic/Latinos, based on the availability and limited studies for Hispanic/Latinos. Due to the heterogeneity of populations, interventions, and measured outcomes, the authors could not conduct a meta-analysis. Feasibility: Suggested interventions would have to be customized to patient's needs, health outcomes, and appropriate health care setting. **L II, B**

						had high positive rate differences (i.e. 50%) on specific outcomes.		
Kenya, Lebron, & Arrechea (2014)	Randomized control trial within a larger randomized control trial	RCT	117 Hispanic patients with a HgbA1c value > 8% within 12 months randomized to the intervention arm of MHHI, in whom CHWs could conduct both pre/post assessments that had access to diabetes care at Jackson Memorial hospital.	Pre/post behaviors of Self - monitoring of blood glucose (SMBG); glucometer use, CHWs interventions, HgbA1c outcomes, population characteristics, personal observations of the researchers	Quantitative measures to include demographic characteristics, glucometer utilization using a questionnaire. Data from questionnaire was then linked to HgbA1c values for intervention participants. Qualitative measures included CHWs interviews with participants understanding perceived barriers to the success of intervention participants.	Level of significance ($p < 0.001$) glycemic control was defined as HgbA1c > 8% as poorly controlled diabetes	SMBG behaviors were not associated with glycemic control. Significant improvement of HgbA1c were identified using CHW intervention non-related to SMBG behaviors.	Strengths: Limitations: Financial status of participants impact SMBG behaviors not studied. Diabetes self-management education was not assessed prior to participation in study. Emphasis on reducing cardiovascular disease risks in poorly controlled diabetes vs sole diabetes interest. Participant eligibility criteria and mix method approach in data collection with control group vs intervention group.

								Feasibility: While findings can be used in developing interventions in the health equity design to improve HgbA1c among Hispanic/Latinos, this study would need to be replicated removing the limitations as outline to assess feasibility. **L I, B**
Lopez Tan-McGrory Horner & Betancourt (2016)	none	**Consensus or Position Statement paper:** Systematically developed recommendations based on research and nationally recognized expert opinion that guides members of a professional organization in decision-making for an issue of concern	n/a; review of effective e-health strategies for type 2 diabetic Latino patients	Components of successful traditional non-IT self-management education programs; e-health text messaging; merging the community health worker model and e-health; deployment of tablet technology and the community health worker model; tailoring e-health interventions for Latino populations to include cultural components and acculturation	n/a; Disparities Solutions Center experts developed recommendations based on current research and modalities available to reduce disparities among Latino diabetic patients	Using factors for personalizing technology based interventions combined with culturally relevant concepts to develop interventions for e-health design for Latinos	Computer and mobile technology interventions will need to be more personalized yet also standardized on multiple modalities to promote long-term reductions in type 2 diabetes disparities. Success of an intervention depends on long-term adherence and consideration for how best to facilitate "treatment" fidelity while balancing participation burden. Prevalence rates among T2D Latinos continues to rise, e-health strategies will become important in promoting prevention and self- management behaviors, team based care, and increasing patient engagement/partici	Strengths: Methods credible Limitations: This is a position statement paper suggesting strategies that can be used to eliminate e-health disparities among Latinos with type 2 diabetes. Strategies would need to be piloted and studied for effectiveness. Generalizability: Interventions suggested in the study will need to be first piloted and measured to determine generalizability.

							pation for clinicians.	**L IV, B**
Perez-Escamilla Chhabra Fernandez Segura-Perez Vega-Lopez Kollannor-Samuel Calle et al, (2015)	none	Random Control Trial -	211 Latinos with poorly controlled type 2 DM who attended a community based ambulatory primary care clinic randomly assigned to a standard of health care (control) group or CHW.	Goals for care, metrics for success, and quality outcomes were monitored.	Data were collected at each participant's home at baseline, 3, 6, 12, & 18 months by one of five community bilingual interviewers not involved with healthcare team and blinded to health care delivery group	The authors conducted between group baseline comparisons for demographic, socioeconomic, blood glycemic and lipid levels and anthropometric characteristics using X2 testing to assess baseline group balance	Strong impact of a home- based model can have on improving glycemic control among highly impoverished Latinos when a community health worker (CHW) is involved. 12-month long intervention was followed by a 6-month post intervention to measure sustainability.	Strengths: Methods credible Limitations: Provider-level data not collected, hard to discern CHW and provider driven pathways that may have led to the significant impact on improved glycemic control. Bias of implementation of CHW intervention. Feasibility: study will need to be replicated to remove data bias and include provider level data prior to assessing scalability and spread. **L I, B**

Wyatt Botwinick Mate Whittington, 2016	Conceptual framework for health care organization to achieve health equity	White paper	Inpatient unit's ambulatory units to include all levels of care consisting of adults and pediatrics.	Population health; social determinants of health; health equity; health disparity and health inequity; health care disparity	The authors suggest the following for measuring health equity: identifying a reference point from which to measure disparities, measure disparities in both absolute and relative terms, for relative measures across different health indicators, express all indicators in terms of adverse events, pairwise comparisons to describe disparities, and use a summary measure of disparities over time for multiple populations.	A positive increase of 57.4% in hand hygiene from January 2012 to December 2012, however, data analysis was very limited and statistical significance was not measured.	White paper serves as a continuation of building on IHI's triple aim: improving patient care, improving health of populations, and reducing costs per capita.	Strengths: framework model to integrate health equity into health care organizations and reduce disparities based on race/ethnicity. Basis of IHI's Pursuing Equity initiative with KP. Limitations: Framework has not been piloted, no studies to determine effectiveness and outcomes Generalizability: framework model will need to be tailored to the individual needs of the health care organization, considering HCO's size, race/ethnicity populations served, and disease prevalence **L III, A**

Tables

Table 1

ROI

Years	**Total benefits (TB)**	**Total costs (TC)**	**Net benefit (TB-TC)**	**B/C ratio (TB/TC)**
2017	$229, 668.80	$111,040	$118,628.8	$2.06 (for every $1 spent)
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*Calculations are based on an estimated sample size of 200 patients. Sample size and ROI may vary based on actual sample size.

Table 2

Budget

Years	Equipment	Staff	Estimated Travel Costs	Focus Groups	Hosting Expenses	Total costs
2017	TBD- includes technology- 4 laptops ($500), 2 teleconferencing phones ($200), and a projector screen and projector ($500) = $1200	1 CNL FTE ($159, 344 annual salary) + 1 MPH summer intern for 6 months ($8400) X 0.40 = $67,000 *40% of time/100= 0.40	$35,000 to include KP Riverside staff travel to IHI for onsite visits in Boston and Philadelphia	$8000 (see focus group table)	n/a refer to 2018	$111,040
2018	N/A- costs should be minimal if handled in 2017	1 CNL FTE ($167, 311.2 annual salary with expected 1% increase) x 0.40= $66,924.48	$35,000 (see above for 2017)	n/a refer to 2017	$10,000 for KP to host conference	$111,924.48
	$1,200	$133,924.48*	$70,000	$7840	$10,000	$222,964.48 for 2 years

*** Staff costs are derived from another budget, but included for paper purposes.**

Table 3

Bid for Focus Groups

Participants	Moderation Costs	Honorarium costs	Estimated total costs of focus groups
2 focus groups = 22 participants (MAX) Recruiting 11 for 8-9 to show from client supplied member list participants=$2640	Moderation (facilitation of questionnaire/discussion guide)	Max honorariums (only paid to those who show up) for 22 participants	Participants + Moderation costs + Honorarium costs
$2640	$3000	$2200	$7840

Figures: KPSCAL Regional Data and KP Riverside Data for Diabetes

Figure 1 indicates a persistent lag over a 2 year period between Hispanic/Latino diabetes members vs other groups in KP SCAL region

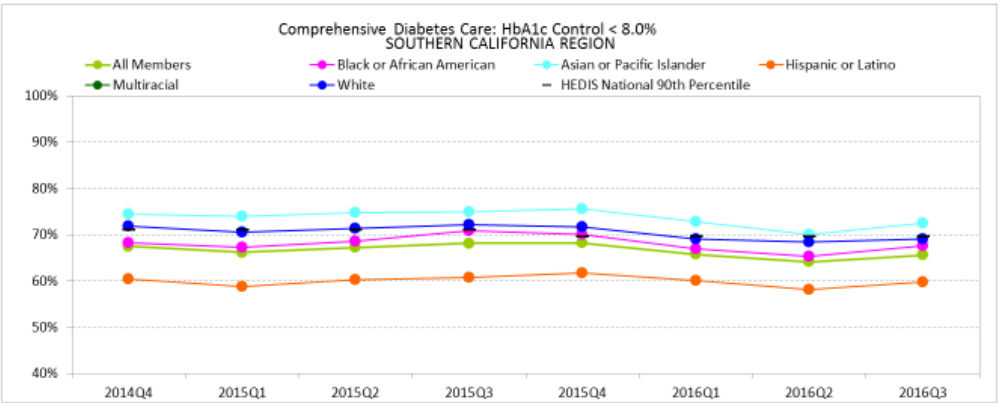

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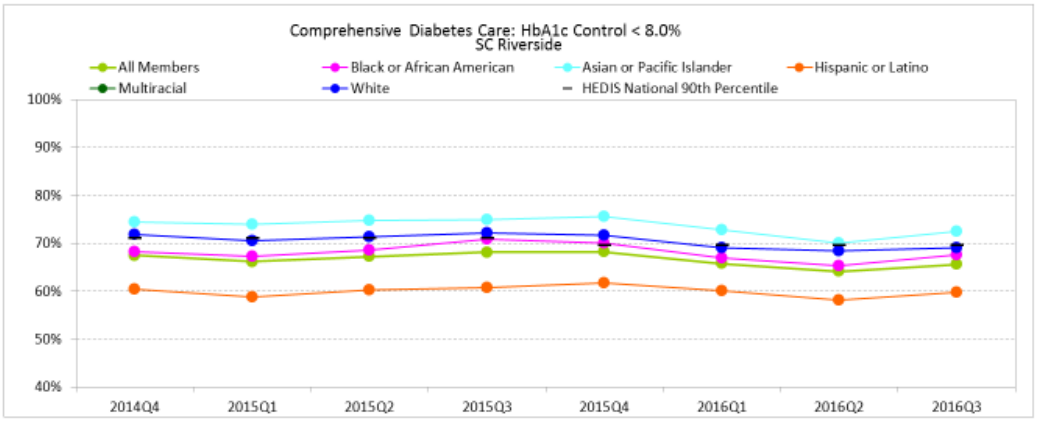
Figure 2 shows a trendline over a 2 year period (2014-2016) for the disparity gap for KP Riverside between Hispanics/Latino vs Caucasian populations. The disparity gap as of 2016 Q3 is 9.8%.



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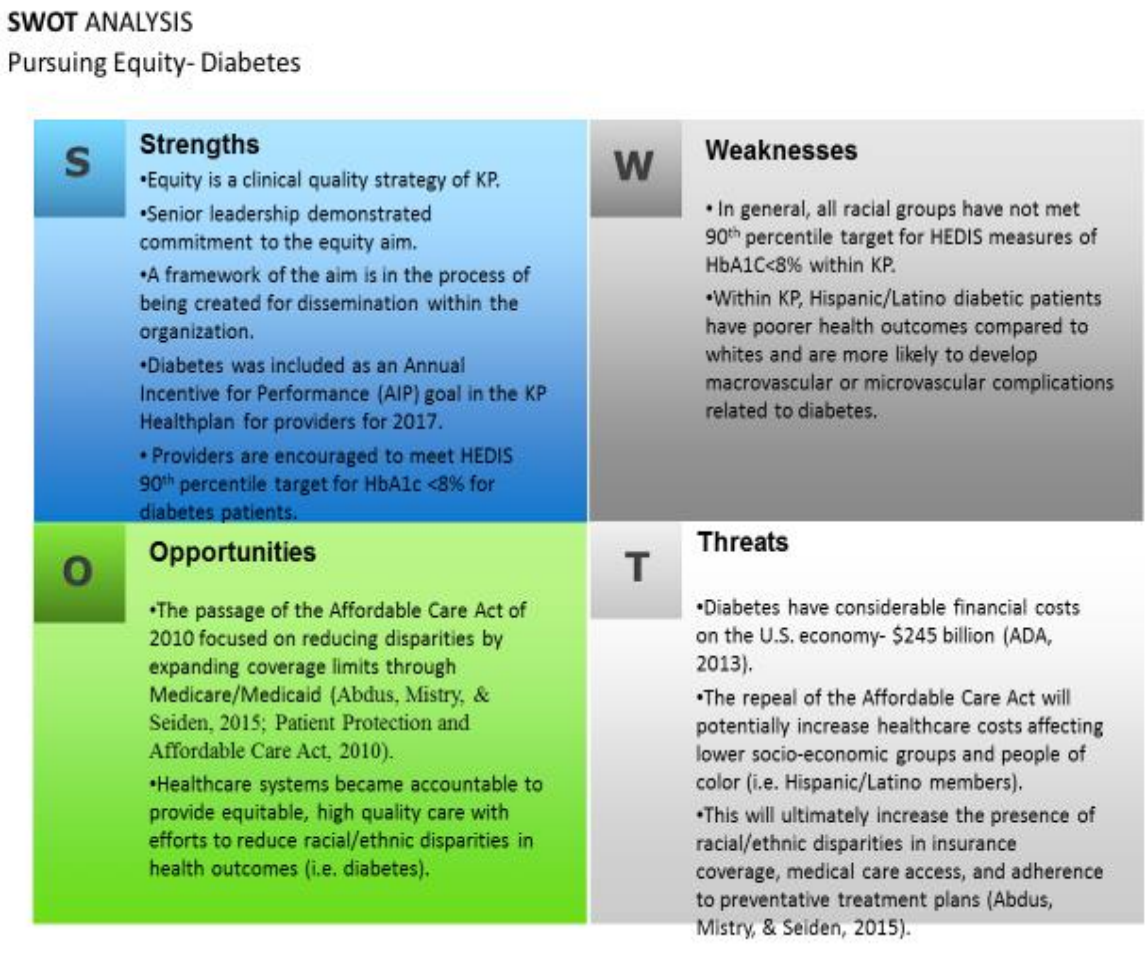
Appendix A: SWOT Analysis

SWOT analysis

*For the purposes of this project, the SWOT analysis is adapted to analyze the internal and external variables affecting the project. See below.



Appendix B: Project Timeline

	5/25	6/1	6/8	6/15	6/22	6/29	7/6	7/13	7/20	7/27	7/30	8/2
Define topic												
Aim & Background												
Microsystem Assessment												
Developing Project Charter												
Review and Analyze SCAL and Riverside Data for DM												
Conduct focus groups for data collection												
Complete Final Charter												
Final Presentation												

Appendix C: Pursuing Equity Charter

Pursuing Equity in Diabetes population

Aisha L. Rawlinson

May 21, 2017

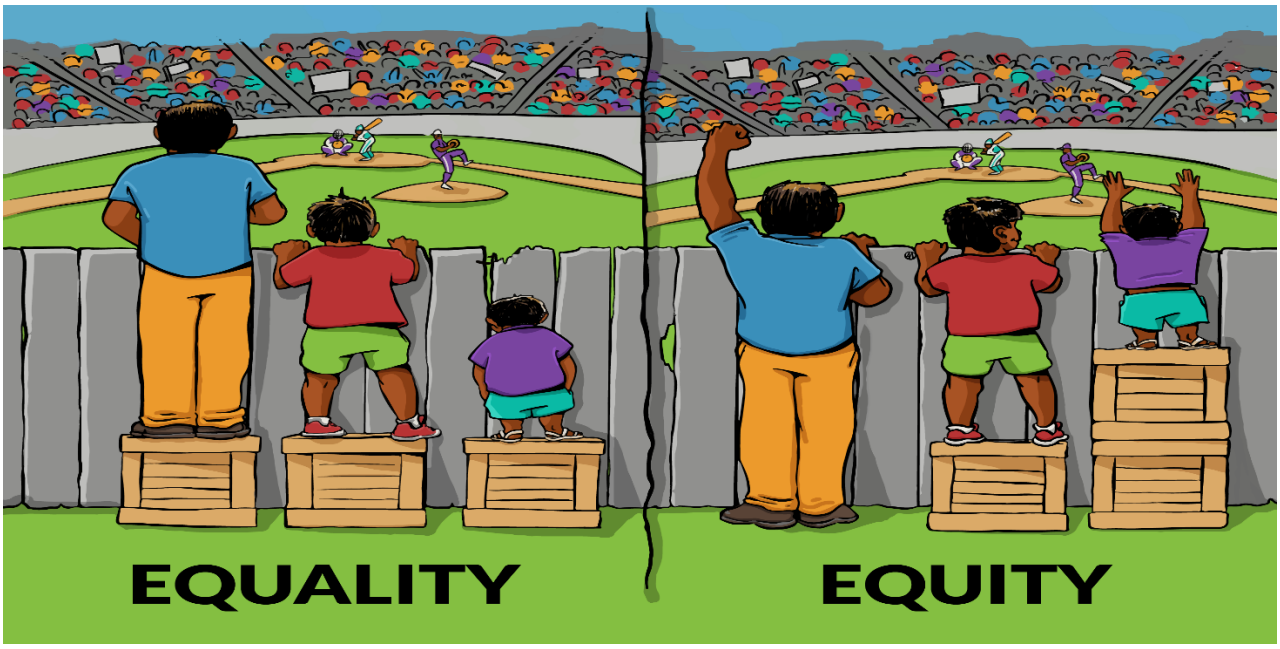


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Table of Contents

Microsystem Assessment

Kaiser Permanente Riverside Indio Medical Office Building (KP Riverside) clinic treats patients with chronic conditions such as diabetes and hypertension. For the purposes of this project, patients with poor glycemic control defines as HgbA1c > 8 will be given considerations.

Professionals

A multidisciplinary team is needed to help implement this improvement project. This team includes:

- Physicians that serve as IT Clinical Advisors
- Physician representatives from Endocrinology and Primary Care
- A representative for IT
- A Pharmacy leader
- Leader(s) of Nursing / Care Management
- A Labor representative
- A CNL with capacity to provide project management and assist with customizing
- workflow, patient education, and training materials for care managers, physicians and team members.

Project aim: To improve glycemic control (HgbA1c< 8) among Hispanic/Latino diabetes patients.

Global aim: To integrate KP National health equity strategy from Macro/Mesosystem perspective to the microsystem level and to reduce health disparity gaps among Hispanic/Latino patients.

Specific: To improve glycemic control of diabetic patients (HgbA1c < 8). To reduce the disparities gap by 1% among Hispanic/Latinos patients to 8.8% from a baseline of 9.8% by Q4

HEDIS data 2018 by improving language concordance, provider/patient communication (email vs telephone), and using KP AIDET training- Hispanic/Latino patients for staff.

Background:

New Kaiser Permanente (KP) Northern California research endorses the urgency of early glycemic control for diabetic patients. Evidence suggests that patients with poor glycemic control one year after diabetes diagnosis had a 58% greater risk of developing microvascular complications, within 3 years after diagnosis had a 68% greater risk of developing macrovascular complications, and 5 years' post diagnosis had a 75% chance of death (Karter, 2016).

Measurement Strategy

Population Criteria: Hispanic/Latino diabetic patients treated at Kaiser Riverside Medical Office Building in Southern California.

Data Collection Method: Data will be obtained from HEIDIs reports, which stratifies by race, ethnicity, age, and gender, and KP internal data reports (i.e. Health Connect and the Online Personal Action Plan) from a sample of 200 patient records to establish baseline. After baseline data is collected, 25 patient records will be reviewed for project measures per week for Q4 2018. Data plan will be reevaluated monthly pending review of results.

Data Definitions

Data Element	Definition
Health Equity	Achieving the highest level of health for all people regardless of race, ethnicity, gender, social determinants of health, or economic status (Wyatt et. al, 2016).
HgbA1c	A lab value that measure the long-term control of blood glucose concentrations (over 3-month period) in diabetic patients
Health disparity and health inequity	are preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by

	socially disadvantaged populations (CDC, 2017). Difference in the health outcomes between groups within a population. Health inequity are differences that are systematic, unjust, and avoidable (Wyatt et. al, 2016).
Healthcare disparity	Racial/ethnic differences defined not from access to care, clinical needs, preferences, and appropriateness of intervention (Wyatt et. al, 2016).
Social determinants of health	Circumstances in which people are born, grow up, live, work, and age, and the systems put in place to deal with illness (Wyatt et. al, 2016).
Population health	Communities in HCO geographic service area or the patients seen in their organization (Wyatt et. al, 2016).
KP AIDET Training- Hispanic/Latino patients	Framework for improving communication between providers and patients using a 5-step behavior component with emphasis on cultural competence.

Measure Description

Measure	Measure Definition	Data Collection source	Goal
HgbA1c	N=# 200 D=# to be defined	HEIDIs report	HgbA1c < 8

Disparities gap among Hispanic/Latinos diabetic patients	N= # to be defined
	D=# to be defined
		Data stratifying by race, ethnicity, gender, and age	1% decrease

Measures (are in processing of being finalized)

Measure	Data Source	Target
Outcome	HB- A1c rates- HEDIS DATA to include Race, Ethnicity, Age, Gender	1% decrease by December 2018
Process	Compliance rates with email vs telephone Patient ease of access/language concordance/communication	1% increase with email vs telephone by December 2018 1% increase by December 2018
Balancing	Increase utilization rates of Provider and/or Panel manager's time	Not to increase > 1%

Goals

To decrease the disparities gap among Hispanic/Latinos by 1% KP Riverside by December 2018 clinic that includes the following:

1. Education of Care Managers/ Clinic Staff using culturally competence tools
2. Patient setup and education
3. Assessing health literacy
4. Using technology modalities
5. Leadership engagement
6. Community resources

Sponsors

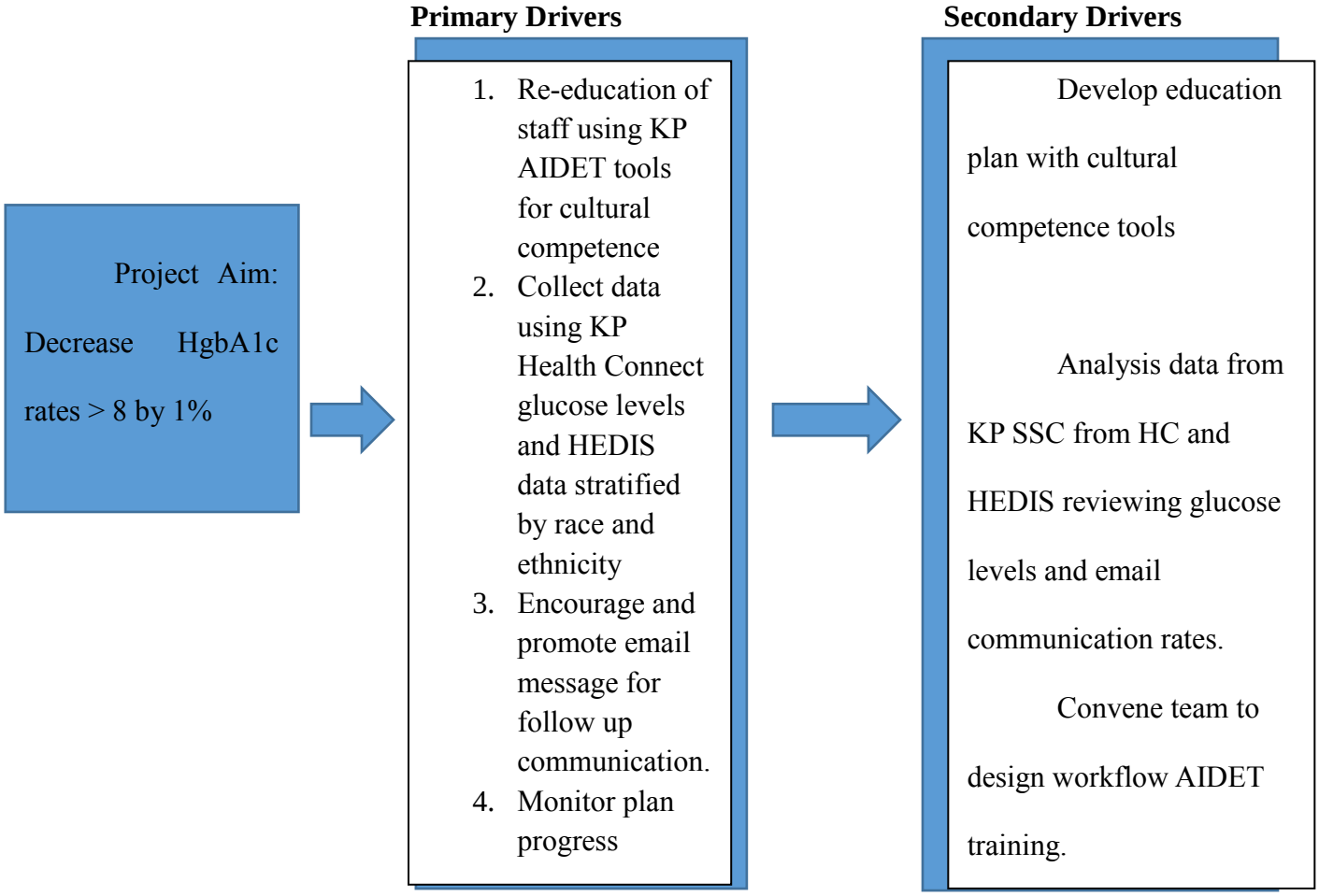
Regional Quality Leader	Care Manager Director
Medical Director	Physician Lead
Regional IT Lead	Health plan Senior Leaders
National Quality Director	Executive Sponsors- Health plan and Medical Group

Team

Physician Champions	
National Program Leader	
Care Manager Educator	
Staff champions	
Care Managers/Nursing Leadership	
Pharmacy Leader	
Operational Sponsors- Health plan and Medical Group	
Physician Leadership	
IT representative	
Nursing Champions	

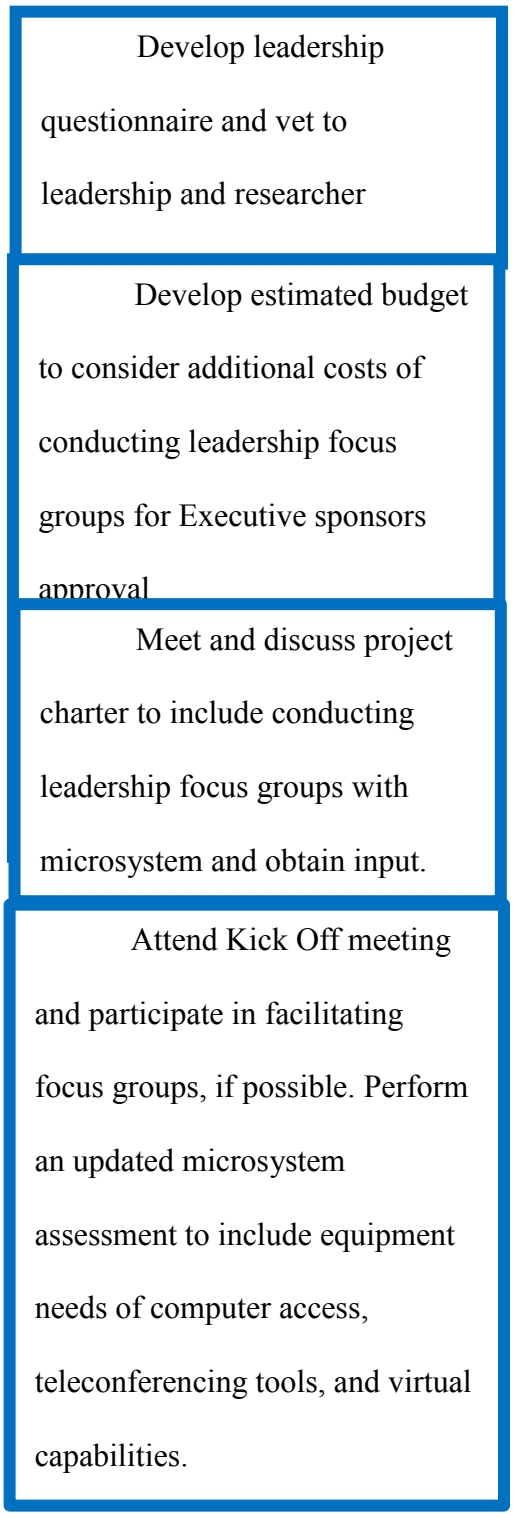
Driver Diagram

1. Driver Diagram Tool



Process Map Tool

Process Example: Creating leadership focus groups:



Baseline data with run chart

Figure 1 indicates a persistent lag over a 2 year period between Hispanic/Latino diabetes members vs other groups in KP SCAL region

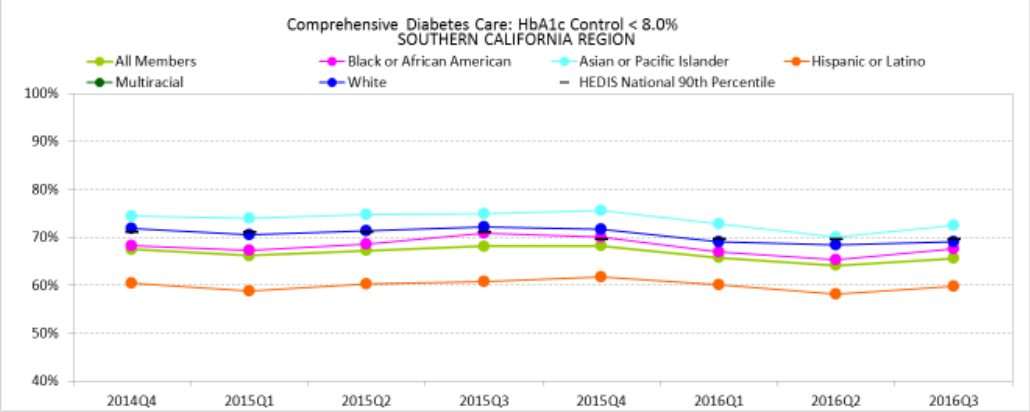


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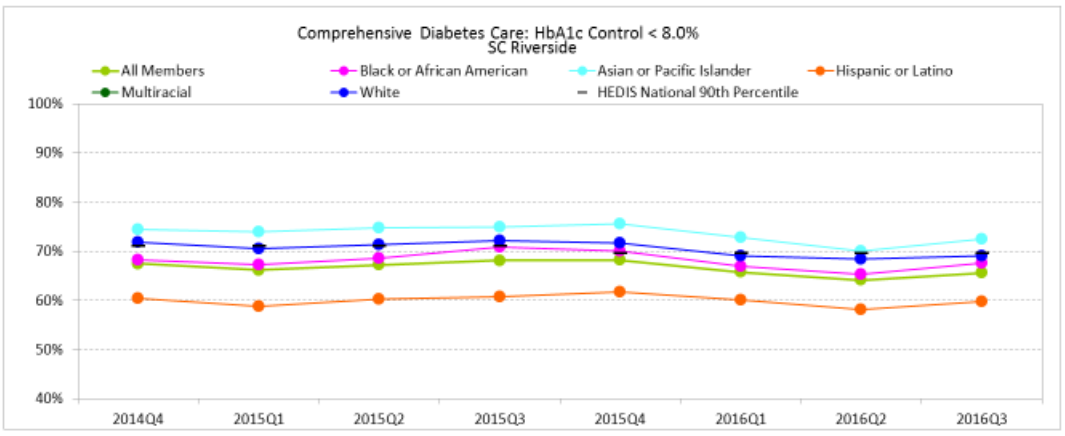
Figure 2 shows a trendline over a 2 year period (2014-2016) for the disparity gap for KP Riverside between Hispanics/Latino vs Caucasian populations. The disparity gap as of 2016 Q3 is 9.8%.



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Change Theory

The theoretical framework of this project is based on Kotter's model of change and Deming's theory of management. In Kotter's theory, which has eight phases; create urgency, form a coalition, vision, remove obstacles, build on change, short term wins, and anchor the change.

Suggested changes to test

Current KP data stratified by race, ethnicity, age, and gender shows a significant disparity gap between Hispanics/Latinos and the Caucasian populations. Of the 8.3 million members, whose spoken language is known 89.8% speak English, 7.9% speak Spanish, and 0.7% speak Chinese (KFHP, 2016). Spanish is the most common language of the 450,000 members who need an interpreter. The demographics of our membership by race/ethnicity are: 46.1% White (non-Hispanic), 26.7% Hispanic or Latino (regardless of race), 14.6% Asian or Pacific Islander (non-Hispanic), 10.6% Black or African American (non-Hispanic), 0.3% American Indian or Alaska Native (non-Hispanic), and 1.7% Multiracial (two or more races, non-Hispanic) (KFHP, 2016). Barriers such as culture, language concordance, resource availability, and transportation can impact treatment and management of diabetes for Hispanics/Latinos.

In partnership with IHI Pursing Equity initiative, my project will focus on improving HgbA1c control for Spanish speaking patients at one medical office building at Riverside medical facility in Southern California to reduce health disparity gaps, ultimately improving patient outcomes (Wyatt, Botwinick, Mate, & Whittington, 2016). Kotter 8 step change model will serve as the framework for this project. Change concepts will include the following: Specific change ideas:

- Self-management: Identify patients with no self-management goal and add note to their next scheduled appointment to discuss.
- Self-management: Connect patients interested in diabetes peer management to program closest to their work or home in their language.
- Resource availability: Ask 5 patients their barriers to nutritious foods, transportation, financial resources.

Project timeline

	5/25	6/1	6/8	6/15	6/22	6/29	7/6	7/13	7/20	7/27	7/30	8/2
Define topic												
Aim & Background												
Microsystem Assessment												
Develop Project Charter												
Review and Analyze SCAL and Riverside DM data												
Conduct focus groups and collect findings												
Complete Charter												
Final Presentation												

CNL Role

The CNL's role will meet the following competencies of implementation, coordination, translation and integration of practice, and management of the project to assist in the delivery of Quality Initiatives within the microsystem (Bullock, 2011). The CNL role is also important in monitoring quality outcomes (AACN, 2013). Organizational and Systems Leadership - the CNL must demonstrate working knowledge of the healthcare system and its component parts,

including sites of care, delivery models, payment models, and the roles of health care professionals, patients, caregivers, and unlicensed professionals (AACN, 2013). The CNL will assume a leadership role of an inter-professional healthcare team with a focus on the delivery of patient-centered care and the evaluation of quality and cost-effectiveness across the healthcare continuum. Use systems theory in the assessment, design, delivery, and evaluation of health care within complex organizations.

The CNL will exhibit knowledge of business acumen such as economic principles and practices, including cost-benefit analysis, budgeting, and strategic planning, human and other resource management, marketing, and value-based purchasing (AACN, 2013; Harris, Roussel, & Thomas, 2017). The CNL will evaluate the efficacy and utility of evidence-based care delivery approaches and their outcomes at the microsystem level. Collaboration with healthcare professionals, including physicians, advanced practice nurses, nurse managers and others, is essential to the stages of planning, implementing, and evaluating performance improvement (AACN, 2013; Wyatt, Laderman, Botwinick, Mate, & Whittington, 2016). The CNL will participate in a shared leadership team to make recommendations for improvement at the micro-system level (AACN, 2013).

Quality Improvement and Safety- The CNL must have a robust knowledge of performance measures to assess and improve the delivery of evidence-based practices and promote outcomes that demonstrate delivery of higher-value care. As part of quality improvement and safety, a comprehensive microsystem assessment is completed to provide the context for problem identification and action (Harris, Roussel, & Thomas, 2017). Then evidence from literature is used to design and direct system improvements that address trends in safety and quality. Quality improvement strategies implemented are based on current evidence, analytics,

and risk anticipation (AACN, 2013). Safety tools of Failure Mode Effects Analysis (FMEA) and root cause analysis (RCA) help to anticipate, intervene and decrease risk. Patient handoffs and transitions of care are evaluated to improve outcomes (AACN, 2013; King & Gerard, 2016).

Lessons Learned

This project has undergone many revisions and steps because it involves translating a key strategic initiative of the organization into a practice to be implemented at the microsystem. Key stakeholders and leaders must approve the project at every step, which can be a very consuming involved process. It is important to scale down goals and tests of changes in the project charter to have realistic and measurable outcomes. In addition, it is important to select an outpatient clinic as pilot to implement a small test of change as this will have a major impact on workflow and process of frontline staff.

Appendix A: Pursuing Equity in Diabetes Population
Riverside Medical Center Leadership Questionnaire

1. Tell us about your commitment to health equity here at Riverside and why it matters to you (i.e. personal motivation)?
   Probe: Can you tell us about a memorable experience with a member or even a member story that significantly influenced your drive to achieve health equity?
2. Can you briefly state the different health disparities that exist within your community (Riverside County)?
3. Why is eliminating health inequities important?
4. As a leader, what actions have you taken to advance health equity here at KP Riverside?
   Probe: What did you implement, and what failed?
5. What barriers do you face taking on the responsibility to improve health equity here at the Riverside County? What successes have you had?
   Probe: What valuable lessons have you learned so far when dealing with improving health equity?
6. What do you think Riverside Medical Center's next steps/actions are moving forward to advance health equity?

Alternate set of questions

1. As a leader, what have you done to get Riverside to this point?
2. What traits in your opinion are essential for a leader to possess when trying to advance health equity at their hospital/organization/MOB?

Focus Group Questions. Source http://barhii.org/download/toolkit/nacdd_he_toolkit.pdf

Managers

1. What is your role here at KP Riverside and how long have you been in your current position? (To distinguish new managers from old managers)
2. What does health equity mean to you?
3. Can you tell me about some of the work the leadership has been doing to address health inequities? How do you feel about this work?
4. How is the importance of health equity here at KP Riverside brought into the decision-making process? Can you give an example?
5. What actions have you taken to advance health equity here at KP Riverside?
6. Do you feel supported by the leadership in your efforts to advancing health equity?
   Probe: What tools does the leadership provide for you to achieve this initiative?
7. What tools do you provide for staff to learn and continue developing skills around their role in addressing health inequities?
   Probe: What opportunities exist for staff to provide input into efforts to address health inequities? Are they encouraged or supported and if so, in what ways?
8. In your opinion, what has worked as far as advancing health equity is concerned and what has not worked?

Front Line Staff

1. In your opinion, what has KP Riverside done to advance health equity?
   Probe: What does health equity mean to you?
2. How long have you been at Kaiser Permanente?
3. How do you feel your managers and leadership support you in this work?
4. How have you been provided with opportunities to give your input into efforts to address health inequities? Are they encouraged or supported?
5. What has KP Riverside provided you with to enable you to develop skills around addressing health inequities?
6. What do you think the leadership needs to do to effectively address health inequity?

Closing statement: As we rap up our interview, please mention any remaining ideas you may have about KP Riverside's commitment to addressing health inequities.

Members First, thank them for their continuous loyalty and membership of KP Riverside

1. How long have you been coming to KP Riverside for care and why did you choose KP Riverside?
2. What is your relationship like with your care provider?
3. Do you trust your care provider?
4. Do you feel like your doctor understands your background and values?
5. Overall, how satisfied are you with the quality of healthcare you have received here at KP Riverside? Is the care meeting your needs?

*Developed by Nkechinyelu Agulefo, MPH

Tables

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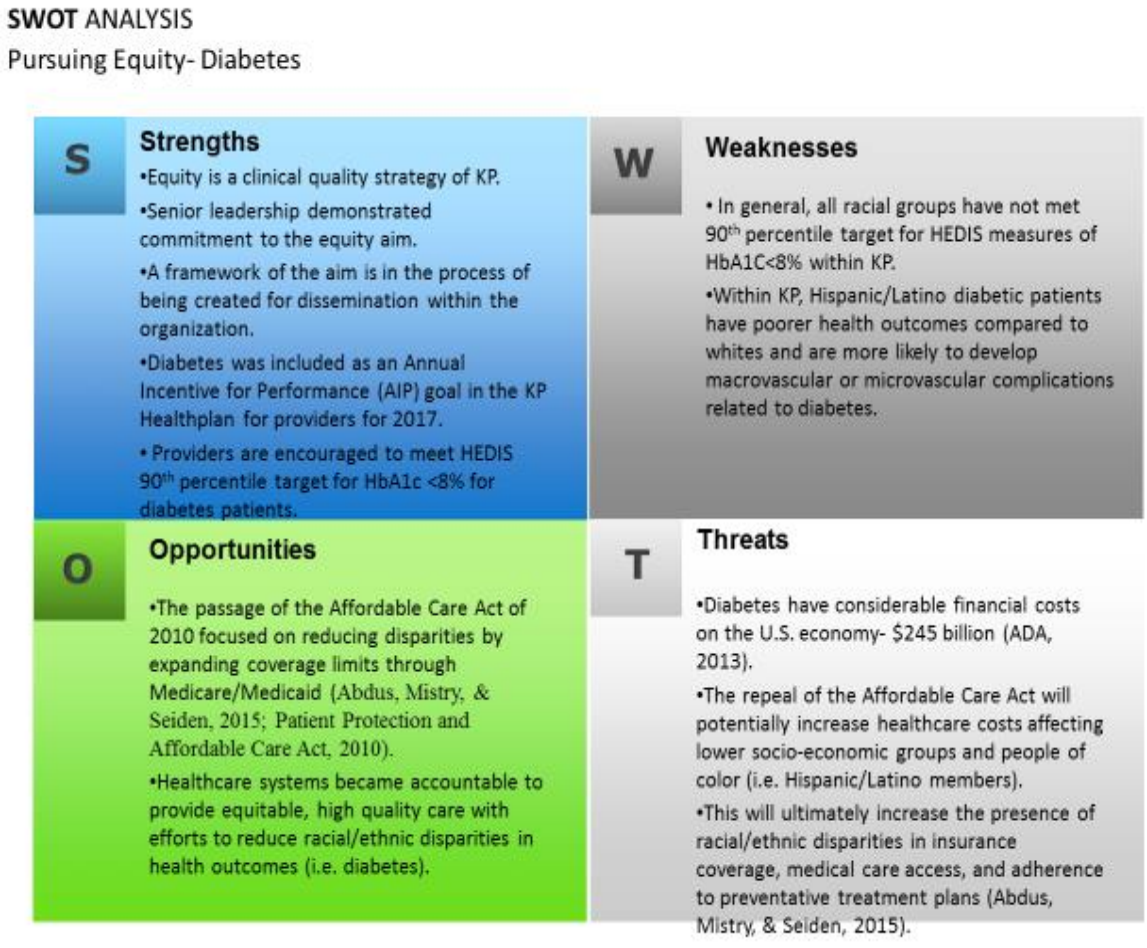
2 focus groups = 22 participants (MAX) Recruiting 11 for 8-9 to show from client supplied member list participants=$2640	Moderation (facilitation of questionnaire/discussion guide)	Max honorariums (only paid to those who show up) for 22 participants	Participants + Moderation costs + Honorarium costs
$2640	$3000	$2200	$7840

Appendix A: SWOT Analysis

SWOT analysis

*For the purposes of this project, the SWOT analysis is adapted to analyze the internal and external variables affecting the project. See below.



Appendix B: Project Timeline

	5/25	6/1	6/8	6/15	6/22	6/29	7/6	7/13	7/20	7/27	7/30	8/2
Define topic												
Aim & Background												
Microsystem Assessment												
Developing Project Charter												
Review and Analyze SCAL and Riverside Data for DM												
Conduct focus groups for data collection												
Complete Final Charter												
Final Presentation												